

CLAIMS

1. Filtration structure (11), in particular a particulate filter for exhaust gases of an internal combustion engine of the type comprising:

- at least first and second filtration elements (15A, 15B) which have a first and second face (24A, 24B) which are arranged opposite each other, respectively;
- a joint (17) for connecting the faces (24A, 24B) which extends between the faces (24A, 24B), this joint (17) comprising a binding agent (41) and reinforcement means (43) which are embedded in this binding agent (41), characterised in that the reinforcement means (43) comprise at least one mesh-like reinforcement element which has independent coherence and which comprises at least one active portion (45) which is generally of substantially planar form.

2. Structure (11) according to claim 1, characterised in that the active portion (45) comprises a plurality of beams (47) which are arranged substantially parallel with a first direction (X-X').

3. Structure (11) according to claim 2, characterised in that the active portion (45) comprises a plurality of cross-members (49) which connect the beams (47) and which are arranged substantially parallel with a second direction (Y-Y'), distinct from the first direction (X-X').

4. Structure (11) according to claim 3, characterised in that the total volume of the apertures (51) delimited by the beams (47) and the cross-members (49) is greater than the total volume of the beams (47) and the cross-members (49).

5. Structure (11) according to any one of the preceding claims, characterised in that the reinforcement element (43) is produced from a metal material.

6. Structure (11) according to any one of claims 1 to 4, characterised in that the reinforcement element (43) is produced from a material which degrades at temperatures greater than 150°C.

7. Structure (11) according to any one of the preceding claims, characterised in that the reinforcement element (43) comprises an active portion (45C, 45D) opposite two adjacent faces (24C, 24D) of the filtration element, the active portions (45C, 45D) being connected to each other.

8. Structure (11) according to any one of the preceding claims, characterised in that it comprises at least one cell (61) which comprises four filtration elements (15), and a common reinforcement element (43), having a sinuous shape, for the filtration elements (15), the common reinforcement element (43) comprising at least three successive active portions (45) which are arranged opposite adjacent faces (24) of the filtration elements (15) of the cell (61).

9. Structure (11) according to claim 8, characterised in that it comprises at least first and second cells (61A, 61B), at least one active portion (45A) of the reinforcement element (43A) of the first cell (61A) being arranged opposite a face (24B) of a filtration element (15B) of the second cell (61B).

10. Reinforcement element intended for a filtration structure according to any one of claims 1 to 9.